Application Serial No. 09/729,240

Docket No. 0026-0001

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (currently amended) A method of identifying semantic units within a search query comprising:

identifying documents relating to the query by comparing search terms in the guery to an index of a corpus;

generating a plurality of multiword substrings from the guery in which each of the substrings includes at least two words;

calculating, for each of the generated substrings, a value that corresponds to a comparison between one or more of the identified documents and the generated substring: [[and]]

selecting semantic units from the generated multiword substrings based on the calculated values; and

storing the selected semantic units in a computer-readable memory, wherein the identification of the documents includes generating an initial list of relevant documents and selecting a predetermined number of most relevant ones of the documents in the initial list as the identified documents

## 2 (canceled)

3. (original) The method of claim 1, wherein the selection of the semantic units further includes:

selecting semantic units from the generated substrings that have calculated values above a predetermined threshold.

(currently amended) <u>A method of identifying semantic units within</u> a search query comprising:

identifying documents relating to the query by comparing search terms in the query to an index of a corpus;

generating a plurality of multiword substrings from the query in which each of the substrings includes at least two words;

calculating, for each of the generated substrings, a value that corresponds to a comparison between one or more of the identified documents and the generated substring:

selecting semantic units from the generated multiword substrings based on the calculated values; and

storing the selected semantic units in a computer-readable memory,

The method of claim 3, wherein the selection of the semantic units further includes [[:]] selecting semantic units from the generated substrings that have calculated values above a predetermined threshold and discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values.

 (previously presented) The method of claim 1, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant ones of the identified documents are assigned higher calculated values than substrings that

(currently amended) A method of locating documents in response to a search query, the method comprising:

receiving the search query from a user:

generating a list of relevant documents based on search terms of the query:

identifying a subset of documents that are most relevant ones of the documents in the list of relevant documents:

generating a plurality of multiword substrings of the query in which each of the multiword substrings includes at least two words;

calculating, for each of the generated substrings, a value related to one or more documents in the subset of documents that contain the substring;

selecting semantic units from the generated multiword substrings based on the calculated values, the selecting including selecting semantic units from the generated substrings that have calculated values above a predetermined threshold and discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values; [fandî]

refining the generated list of relevant documents based on the selected semantic units; and

transmitting the refined list of relevant documents to the user.

 (previously presented) The method of claim 6, wherein the identified subset includes a predetermined number of the most relevant ones of the documents in the list of relevant documents.

- 8. (canceled)
- 9. (canceled)
- 10. (previously presented) The method of claim 6, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant ones of the documents are assigned higher calculated values than substrings that occur in less relevant ones of the documents.
  - (currently amended) A system comprising:

a server connected to a network, the server receiving search queries from users via the network, the server including:

at least one processor; and

a memory operatively coupled to the processor, the memory storing program instructions that when executed by the processor, cause the processor to: identify a list of documents relating to the search query by matching individual search terms in the query to an index of a corpus; generate a plurality of multiword substrings from the query in which each of the substrings includes at least two words: calculate, for each of the generated substrings, a value relating

to one or more documents of the identified list of documents that contain the generated substring; and select semantic units from the generated multiword substrings based on the calculated values as semantic units that have calculated values above a predetermined threshold and in which semantic units that overlap other substrings with a higher calculated value are discarded, the selected semantic units being stored in the memory.

- (original) The system of claim 11, wherein the processor refines
   the identified list of documents based on the selected semantic units.
- (original) The system of claim 12, wherein the system transmits the refined list of documents to the user.
- (original) The system of claim 11, wherein the network is the Internet and the corpus is a collection of web documents.
  - 15. (canceled)
  - (canceled)
- 17. (previously presented) The system of claim 11, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant documents

are assigned higher calculated values than substrings that occur in less relevant documents

18. (currently amended) A server comprising:

a processor; and

the substring, and

a memory operatively coupled to the processor, the memory including:

a ranking component configured to return a list of documents ordered by relevance in response to a search query; and

a semantic unit locator component configured to locate semantic units, each having a plurality of words, in search queries entered by a user based on a predetermined number of most relevant documents in the list of documents returned by the ranking component, the located semantic units being stored in the memory.

wherein the semantic unit locator is further configured to

generate a plurality of substrings of the guery.

calculate, for each generated substring, a value relating to the

portion of the predetermined number of the most relevant documents that contain

locate the semantic units from the generated values.

19. (original) The server of claim 18, further including:

a search engine configured to refine the list of documents based on the located semantic units.

20. (original) The server of claim 19, wherein the processor is configured to:

transmit the refined list of documents to a user that provided the query.

- 21. (canceled)
- 22. (currently amended) The server of claim 18 [[21]], wherein the semantic unit locator is configured to locate semantic units from the generated substrings that have calculated values above a predetermined threshold.
- 23. (original) The server of claim 22, wherein the semantic unit locator is configured to discard substrings that overlap other substrings with a higher calculated value.
- 24. (currently amended) The server of claim 18 [[21]], wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant documents are assigned higher calculated values than substrings that occur in less relevant documents.
- 25. (currently amended) A computer-readable medium storing instructions for causing at least one processor to perform a method that identifies semantic units within a search query, the method comprising:

identifying documents relating to the query by matching individual search terms in the query to an index of a corpus, the identification of the documents further including generating an initial list of relevant documents and selecting a predetermined number of the most relevant documents in the initial list to include in the identified documents;

forming a plurality of multiword substrings of the query in which each of the substrings includes at least two words;

calculating, for each of the substrings, a value relating to the portion of the identified documents that contain the substring; [[and]]

selecting semantic units from the generated multiword substrings based on the calculated values; and

storing the selected semantic units in a memory.

- (canceled)
- 27. (currently amended) <u>A computer-readable medium storing</u>
  instructions for causing at least one processor to perform a method that identifies
  semantic units within a search query, the method comprising:

identifying documents relating to the query by matching individual search terms in the query to an index of a corpus;

forming a plurality of multiword substrings of the query in which each of the substrings includes at least two words:

calculating, for each of the substrings, a value relating to the portion of the identified documents that contain the substring:

selecting semantic units from the generated multiword substrings based on the calculated values; and

storing the selected semantic units in a memory.

The computer-readable medium of claim 25, wherein the selection of the semantic units further includes [[:]] selecting semantic units from the generated substrings that have calculated values above a predetermined threshold and discarding substrings that overlap other substrings with a higher calculated value.

## 28. (canceled)

- 29. (previously presented) The computer-readable medium of claim 27, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant documents are assigned higher calculated values than substrings that occur in less relevant documents.
- 30. (currently amended) A computer-readable medium storing instructions for causing a processor to perform a method, the method comprising: receiving [[the]] a search guery from a user;

generating a list of relevant documents based on individual search terms of the query;

identifying a subset of documents that are the most relevant documents from the list of relevant documents:

forming a plurality of multiword substrings of the query in which each of the multiword substrings includes at least two words;

calculating, for each of the substrings, a value related to the portion of the subset of documents that contain the substring;

selecting semantic units from the generated multiword substrings based on the calculated values; [fandi]

refining the generated list of relevant documents based on the selected semantic units; and

transmitting the refined list of relevant documents to the user,
wherein the selection of the semantic units further includes selecting
semantic units from the generated substrings that have calculated values above
a predetermined threshold and discarding substrings that overlap other
substrings with a higher calculated value.

- 31. (original) The computer-readable medium of claim 30, wherein the identified subset includes a predetermined number of the most relevant documents from the list of relevant documents.
  - 32. (canceled)
  - 33. (canceled)
- (previously presented) The computer-readable medium of claim
   wherein the calculated values are weighted based on a ranking defined by

relevance of the identified documents, such that substrings that occur in more relevant documents are assigned higher calculated values than substrings that occur in less relevant documents.

- 35. (original) The computer-readable medium of claim 30, wherein the computer-readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier waye.
  - 36. (canceled)
- 37. (previously presented) The method of claim 1, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that an occurrence of a substring in a more relevant one of the identified documents is weighted more than an occurrence of the substring in a less relevant one of the documents.
- 38. (previously presented) The method of claim 6, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that an occurrence of a substring in a more relevant one of the identified documents is weighted more than an occurrence of the substring in a less relevant one of the documents.
- (previously presented) The system of claim 11, wherein the calculated values are weighted based on a ranking defined by relevance of the

identified documents, such that an occurrence of a substring in a more relevant one of the identified documents is weighted more than an occurrence of the substring in a less relevant one of the documents.

- 40. (previously presented) The computer-readable medium of claim 27, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that an occurrence of a substring in a more relevant one of the identified documents is weighted more than an occurrence of the substring in a less relevant one of the documents.
- 41. (previously presented) The computer-readable medium of claim 30, wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that an occurrence of a substring in a more relevant one of the identified documents is weighted more than an occurrence of the substring in a less relevant one of the documents.